Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-16. (Cancelled).

17. (**Currently Amended**) A method of operating a coal-burning power plant combustion system having a stack to lower an acid dewpoint temperature of a flue gas, the method comprising the steps of:

obtaining a coal-burning power plant;

partially combusting a fuel including coal in a first stage to create a chemically reducing environment in situ**, wherein the ratio of the concentration of reducing radicals to oxidizing radicals is greater than about 10**;

adjusting the reducing environment for a sufficient time period such that the flue gas acid dewpoint temperature is lowered to a temperature lower than the temperature of flue gas traveling through the stack by reducing SO_3 formed during combustion to SO_2 by electron addition; and

combusting the remainder of the fuel and combustion intermediates in a second stage with an oxidizing environment.

18. (Previously Presented) The method of claim 17, including the step of micro-staging the first stage fuel combustion.

19. (Original) The method of claim 18, wherein the micro-staging is provided through the use of low-NOx burners.

20. (Previously Presented) The method of claim 17, including the step of macro-staging the first stage of fuel combustion.

21. (Original) The method of claim 20, wherein the macro-staging is provided through the use of over-fired air.

22. (Previously Presented) The method of claim 17, including a combination of micro-staging and macro-staging.

23. (Original) The method of claim 22, wherein the micro-staging is provided by low-NOx burners and the macro-staging is provided by over-fired air.

24. (**Currently Amended**) The method of claim 17, wherein the fuel is coal having ~~at least~~ **an S content in the range of** about 0.8% S **to about 3.0% S** ~~content~~, and wherein the oxidizing environment is produced at least in part by over-fired air provided at a percent, based on total air, ~~chosen from at least one~~ **in the range of about** 10% to about 30%.

25. (**Currently Amended**) A method of operating a coal-burning power plant combustion system to decrease the acid dewpoint temperature of its flue gas to a temperature lower than the temperature of flue gas traveling through a stack of the combustion system, the method comprising the steps of:

obtaining a coal-burning power plant;

partially combusting a fuel including coal in a first stage to create a chemically reducing environment in situ **wherein the ratio of the concentration of reducing radicals to oxidizing radicals is greater than about 1**;

combusting the remainder of the fuel and combustion intermediates in a second stage with an oxidizing environment;

measuring the acid dewpoint of the flue gas;

measuring the temperature of the flue gas traveling through the stack; and

if the measured acid dewpoint temperature is higher than the measured flue gas temperature, adjusting the reducing environment for a sufficient time period such that SO_3 formed during combustion is reduced to SO_2 by electron addition to decrease the acid dewpoint temperature of the flue gas.

26. (Previously Presented) The method of claim 25, including the step of micro-staging the first stage fuel combustion.

27. (Original) The method of claim 26, wherein the micro-staging is provided through the use of low-NOx burners.

28. (Previously Presented) The method of claim 25, including the step of macro-staging the first stage of fuel combustion.

29. (Original) The method of claim 28, wherein the macro-staging is provided through the use of over-fired air.

30. (Previously Presented) The method of claim 25, including a combination of micro-staging and macro-staging.

31. (Original) The method of claim 30, wherein the micro-staging is provided by low-NOx burners and the macro-staging is provided by over-fired air.

32. (**Currently Amended**) The method of claim 25, wherein the fuel is coal having ~~at least~~ **an S content in the range of** about 0.8% S **to about 3.0% S** ~~content~~, and wherein the oxidizing environment is produced at least in part by over-fired air provided at a percent, based on total air, ~~chosen from at least one~~ **in the range of about** 10% to about 30%.

33. (Previously Presented) The method of claim 17, wherein SO_3 concentration is adjusted to about 15 to 20 ppm at an ESP component of the combustion system, thereby optimizing ESP function.

34. (Previously Presented) The method of claim 25, wherein SO_3 concentration is adjusted to about 15 to 20 ppm at an ESP component of the combustion system, thereby optimizing ESP function.

35. (**Currently Amended**) The method of claim 17, wherein the coal-burning power plant has a load ~~of at least~~ **in the range of** about 70 MW_{net} **to about 182 MW_{net}**.

36. (**Currently Amended**) The method of claim 24, wherein the coal-burning power plant has a load ~~of at least~~ **in the range of** about 70 MW_{net} **to about 182 MW_{net}**.